

KIRKBY-IN-ASHFIELD
URBAN DISTRICT COUNCIL.

Annual Report

For 1904,

BY

JOHN MACKENZIE,

Medical Officer of Health.

EAST KIRKBY :
PRINTED BY ARTHUR MOORE, CEMETERY ROAD.

Kirkby-in-Ashfield Urban District Council.

Chairman :

J. G. SHACKLOCK, Esq. J.P.

Vice-Chairman :

GEORGE HENRY HUNT, Esq.

Councillors :

East Ward :

J. G. SHACKLOCK

JOHN MERCER

WILLIAM BIRD

E. BOWEN

W. DAVISON

West Ward :

W. HOLT

W. H. HENSON

GEORGE HY. HUNT

J. T. RILEY

FRANK RAWSON

South Ward :

C. T. PILCH

F. ABBOTT

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J. TATE

J. SMITH

Clerk :

G. H. HIBBERT, Esq., Solicitor.

Medical Officer of Health :

JOHN MACKENZIE.

Sanitary Inspector :

WILLIAM MASSEY.

Surveyor :

W. DODSLEY.

Collector of General and District Rates :

SAMUEL UNWIN.

REPORT.

To the Chairman and Members of the Kirkby-in-Ashfield Urban District Council.

GENTLEMEN,

I beg to submit the Annual Report on the health and sanitary circumstances of your district.

In the memorandum issued yearly by the Local Government Board for the guidance of Medical Officers of Health in furnishing their Annual Reports, it is particularly observed that definite information is required on the following subjects :—

Information required by the L.G.B.

1.—Physical features and general character of the district.

2.—House accommodation specially for the working classes.

3.—Sewerage and Drainage.

4.—Excrement disposal.

5.—Water supply.

6.—Slaughter-houses, Dairies, Cow Sheds, etc.

7.—Nuisance Proceedings.

8.—Method of dealing with infectious diseases.

Subject matter
of Report.

In the pages of this Report definite information will be given and the above subjects briefly treated, each of course in its own place and natural connection with the workings of our sanitary system.

It may well appear to the members of the Council that a good deal of what is said is an oft repeated tale, told and re-told at their monthly meetings. The Medical Officer of Health, like many another organism in the economy of nature, has often a double function in the discharge of his duties, so that although the questions dealt with may strike the Local Authority as weary repetition, yet the Central Authority (Local Government Board) may consider the same as valuable and interesting, affording detailed knowledge of the health and habits of the community.

The Central
Authority
(L.G.B.) require
information
already well
known to the
local Sanitary
Authority.

Area.

The Urban District of Kirkby-in-Ashfield has an area of 5590 acres mostly arable land.

Physical
features and
general charac-
ter of the
district.

The district is divided from east to west by the Erewash valley, except to the east where it is indented by the beginning of the Leen valley.

Along the line of what now remains of the once famous Sherwood Forest the soil is loamy and porous, in parts sandy, as on the Leen Valley slopes. The geological formation here is red sandstone and magnesian limestone. To the west and south the surface formation is irregular and the soil forming the lower part of the slopes and base of the valleys heavy loam, with a substratum of cold clay, containing a large amount of moisture, so that the rise and fall in the ground water, as seen by some wells, is very considerable.

Soil.

Rise and fall of ground water.

Again the population is grouped in the three principal areas overlooking the Erewash valley and known for sanitary purposes as East, West, and South Wards.

Position of Wards.

The East Ward, which nearly includes the whole of East Kirkby, rests on a gentle slope, the surface level inclining to the South West, and has a population of 5965.

East.

The West Ward, comprising Kirkby Town, Park, and Bentinck districts, situate partly on level fields, as in the Park, and partly on hill side slopes, as part of Kirkby Town, Bentinck and Mayfield, forms the western boundary of the Erewash valley with a southern aspect, having a population of 4020.

West.

d/.

The South Ward, with a population of 3770, includes the villages of Annesley Woodhouse, Kirkby Woodhouse, Nuncargate, Mutton Hill, Todd's Row and Portland Row. Mutton Hill, Nuncargate and Kirkby Woodhouse are ranged along the southern boundary of the Erewash valley with a northern aspect.

South.

The subsoil here is exceedingly porous, dry, and sandy, not without its influence on certain endemic diseases, as we shall see further on. Annesley Woodhouse, the

Nature of soil in South Ward.

largest of these districts, is situated on the crest of the rising ground commanding an attractive view of the Erewash valley to the west and the Leen valley to the east. Portland Row and Todd's Row, as the names indicate, are rows of workmen's houses, about a mile apart and situated on slopes facing south-east, as will be explained when dealing with the sewerage system, having a separate outfall.

The following table is designed to show the increase in population and house property in each Ward since census 1901.

TABLE I.

| Increase in population and house property. | Years | East Ward | West Ward | South Ward | Totals | Annual in- crease | |
|--|------------------|-----------|-----------|------------|--------|----------------------|---------------|
| | | | | | | Houses | Popu- tion |
| | 1901— | | | | | | |
| | Inhabited houses | 756 | 625 | 674 | 2055 | | |
| | Population ... | 3872 | 3173 | 3273 | 10318 | | |
| | 1902— | | | | | | |
| | Inhabited houses | 906 | 686 | 707 | 2299 | 244 | |
| | Population ... | 4548 | 3444 | 3549 | 11541 | | 1223 |
| | 1903— | | | | | | |
| | Inhabited houses | 1065 | 741 | 726 | 2532 | 233 | |
| | Population ... | 5325 | 3705 | 3630 | 12660 | | 1119 |
| | 1904— | | | | | | |
| | Inhabited houses | 1193 | 804 | 754 | 2751 | 219 | |
| | Population ... | 5965 | 4020 | 3770 | 13755 | | 1095 |

Comparative
increase of
houses and
population in
Wards.

The chief increase in population and house property has taken place this year in the East Ward, viz.:—new houses 128, increase of population 640. In 1903 159 new houses, increase of population 777. In 1902 150 new houses, increase of population 676.

In the West Ward the corresponding increases in new houses and population are :—1904, 63 new houses and population 315; 1903, 55 new houses, population 261; 1902, 61 new houses, population 271.

South Ward :—1904, 28 new houses, increase of population 140; 1903, 19 new houses, population 81; 1902, 33 new houses, population 276.

Further the table shows for the last three years an annual increase of population over the whole area of 1095 in 1904, 1119 in 1903, and 1223 in 1902.

Now comparing the natural increase of population, i.e., increase of births over deaths, for those years with the actual increase, we find in 1904 that the actual exceeds the natural by 749, whilst in 1903 and 1902 the figures in favour of the actual increase are 778 and 933 respectively. This increase points to a steady influx of new comers. A problem of the utmost importance to every Sanitary Authority is how to keep abreast of an ever increasing population in improvements and organization.

It is the aim of this Report, as we endeavour to write another page in our sanitary history, to point out how much progress has been made during the year under review and with equal fidelity to disclose and lay bare the weak spots and actual cracks in the hygienic shield against our invincible but none the less insidious and determined foes, the micro-organism of disease, who never fail to take full advantage of our sanitary faults, indifferent indeed as to whether these are due to innocent ignorance or culpable neglect.

In an appendix to the Report will be found schedules dealing with :—

Aim of
Report.

S/.

Schedules
prepared.

- (a) Administration of Factory and Workshops Act, 1901.
- a /* (b) Houses condemned as unfit for human habitation under the Housing of the Working Classes Act, 1890, Sec. 32.
- (c) Summary of sanitary work done in the Inspector of Nuisances department.
- (d) Tables I., II., III., and IV. provided for the Local Government Board and County Council.

Vital statistics. One hundred and seventy-five deaths were registered, equivalent to an annual mortality of 12·6 per 1000 of the population, occurring quarterly as follows :—

| | | | Males | Females |
|-------------------------|-------------|-----|-------|---------|
| Death-rate at all ages. | 1st Quarter | ... | 24 | 21 |
| | 2nd „ | ... | 24 | 17 |
| | 3rd „ | ... | 28 | 23 |
| | 4th „ | ... | 25 | 13 |
| | Totals 1904 | ... | 101 | 74 |
| | Totals 1903 | ... | 69 | 85 |
| | Totals 1902 | ... | 90 | 86 |
| | | | | |

TABLE II.

Showing Deaths in Wards :—

| | | East Ward | West Ward | South Ward | Deaths occurring quarterly in Wards. |
|-------------|-----|-----------|-----------|------------|--------------------------------------|
| 1st Quarter | ... | 11 | 16 | 16 | |
| 2nd Quarter | ... | 16 | 10 | 15 | |
| 3rd Quarter | ... | 24 | 11 | 18 | |
| 4th Quarter | ... | 18 | 10 | 10 | |
| Totals 1904 | ... | 69 | 47 | 59 | |
| Totals 1903 | ... | 57 | 52 | 45 | |
| Totals 1902 | ... | 65 | 61 | 50 | |
| Totals 1901 | ... | 61 | 55 | 50 | |
| Totals 1900 | ... | 88 | 66 | 36 | |
| Totals 1899 | ... | 58 | 56 | 45 | |
| Totals 1898 | ... | 56 | 35 | 49 | |
| Totals 1897 | ... | 58 | 24 | 47 | |

Death-rate for the last nine years :—

| | | | | | |
|------|-----|---------------------------------|---|---|--|
| 1896 | ... | 18·5 per 1000 of the population | | | Corrected death-rate according to census 1901. |
| 1897 | ... | 14·7 | „ | „ | |
| 1898 | ... | 15·0 | „ | „ | |
| 1899 | ... | 16·4 | „ | „ | |
| 1900 | ... | 18·9 | „ | „ | |
| 1901 | ... | 15·9 | „ | „ | |
| 1902 | ... | 15·2 | „ | „ | |
| 1903 | ... | 12·1 | „ | „ | |
| 1904 | ... | 12·6 | „ | „ | |

Five Hundred and Twenty-one births were registered during the year, equivalent to an annual birth-rate of 37·6 per 1000 of the population, occurring quarterly as follows :—

Birth-rate.

| | | | Males | Females |
|-------------|-----|-----|-------|---------|
| 1st Quarter | ... | ... | 66 | 53 |
| 2nd „ | ... | ... | 66 | 67 |
| 3rd „ | ... | ... | 80 | 73 |
| 4th „ | ... | ... | 69 | 47 |
| | | | <hr/> | <hr/> |
| Totals 1904 | ... | | 281 | 240 |
| | | | <hr/> | <hr/> |
| Totals 1903 | ... | | 244 | 251 |
| | | | <hr/> | <hr/> |
| Totals 1902 | ... | | 239 | 227 |
| | | | <hr/> | <hr/> |
| Totals 1901 | ... | | 214 | 215 |
| | | | <hr/> | <hr/> |
| Totals 1900 | ... | | 202 | 199 |
| | | | <hr/> | <hr/> |
| Totals 1899 | ... | | 219 | 193 |
| | | | <hr/> | <hr/> |
| Totals 1898 | ... | | 199 | 155 |
| | | | <hr/> | <hr/> |
| Totals 1897 | ... | | 190 | 208 |
| | | | <hr/> | <hr/> |

TABLE III

The following table shows the births in each Ward :—

| | | East Ward | West Ward | South Ward | Births occurring quarterly in Wards. |
|-------------|-----|-----------|-----------|------------|--------------------------------------|
| | | | | | |
| 1st Quarter | ... | 54 | 24 | 41 | |
| 2nd Quarter | ... | 58 | 36 | 39 | |
| 3rd Quarter | ... | 74 | 36 | 43 | |
| 4th Quarter | ... | 52 | 26 | 38 | |
| Totals 1904 | ... | 238 | 122 | 161 | |
| Totals 1903 | ... | 212 | 146 | 137 | |
| Totals 1902 | ... | 204 | 129 | 133 | |
| Totals 1901 | ... | 169 | 125 | 135 | |
| Totals 1900 | ... | 181 | 107 | 113 | |
| Totals 1899 | ... | 180 | 108 | 124 | |
| Totals 1898 | ... | 157 | 91 | 106 | |
| Totals 1897 | ... | 178 | 79 | 141 | |

Birth-rate for the last nine years :—

| | | |
|------|-----|---------------|
| 1896 | ... | 39·5 per 1000 |
| 1897 | ... | 44·7 „ |
| 1898 | ... | 38·1 „ |
| 1899 | ... | 42·6 „ |
| 1900 | ... | 39·9 „ |
| 1901 | ... | 41·2 „ |
| 1902 | ... | 40·4 „ |
| 1903 | ... | 39·1 „ |
| 1904 | ... | 37·8 „ |

Comparative birth-rate corrected according to census 1901.

Eighty-six deaths were registered under 1 year of age, equivalent to an annual mortality of 165·0 per 1000 births, 491·4 per 1000 total deaths, and 6·2 per 1000 of the population, occurring quarterly as follows :—

Infant
mortality.

| | | Males | Females |
|-------------|-----|-------|---------|
| 1st Quarter | ... | 15 | 7 |
| 2nd „ | ... | 9 | 10 |
| 3rd „ | ... | 17 | 9 |
| 4th „ | ... | 13 | 6 |
| | | — | — |
| | | 54 | 32 |
| | | — | — |

TABLE IV.

Showing deaths under one year of age occurring quarterly in each Ward :—

Ward infant
mortality.

| | | East Ward | West Ward | South Ward |
|-------------|-----|-----------|-----------|------------|
| 1st Quarter | ... | 8 | 6 | 8 |
| 2nd Quarter | ... | 8 | 3 | 8 |
| 3rd Quarter | ... | 15 | 7 | 4 |
| 4th Quarter | ... | 8 | 6 | 5 |
| Totals 1904 | ... | 39 | 22 | 25 |
| Totals 1903 | ... | 24 | 12 | 19 |
| Totals 1902 | ... | 28 | 28 | 25 |
| Totals 1901 | ... | 25 | 25 | 22 |
| Totals 1900 | ... | 44 | 23 | 15 |
| Totals 1899 | ... | 23 | 21 | 14 |
| Totals 1898 | ... | 29 | 8 | 17 |
| Totals 1897 | ... | 21 | 7 | 28 |
| Totals 1896 | ... | 35 | 12 | 16 |

Infant death-rate for the last nine years :—

| | | |
|-------------------------|-----|-----------------------|
| 1896 | ... | 284·8 per 1000 births |
| 1897 | ... | 140·7 „ |
| 1898 | ... | 152·5 „ |
| 1899 | ... | 140·7 „ |
| 1900 | ... | 204·4 „ |
| 1901 | ... | 167·8 „ |
| 1902 | ... | 173·8 „ |
| 1903 | ... | 111·1 „ |
| 1904 | ... | 165·0 „ |
| Average years 1896—1904 | | ... 171·2 |

Infant death-
rate for the last
nine years.

TABLE V.

Notifiable Zymotic diseases occurring in each month :—

| | | Scarlet fever | Diphtheria | Typhoid fever | Puerperal fever | Erysipelas | Small-pox | Membranous Croup | Chicken-pox | Typhus fever |
|----------------|-----|---------------|------------|---------------|-----------------|------------|-----------|------------------|-------------|--------------|
| January | ... | 15 | 2 | 3 | ... | ... | ... | ... | ... | ... |
| February | ... | 13 | ... | 1 | ... | ... | 1 | ... | ... | ... |
| March | ... | 6 | ... | 1 | ... | 1 | ... | ... | ... | ... |
| April ... | ... | 4 | ... | 1 | 1 | 1 | ... | ... | ... | ... |
| May ... | ... | 2 | ... | 1 | ... | ... | 2 | ... | 6 | ... |
| June ... | ... | 1 | ... | 1 | ... | ... | ... | ... | 2 | ... |
| July ... | ... | 2 | ... | ... | ... | 2 | ... | ... | 5 | ... |
| August | ... | 2 | 1 | 4 | ... | ... | ... | ... | 1 | ... |
| September | ... | 9 | 2 | 2 | 1 | 1 | ... | ... | 1 | ... |
| October | ... | 9 | 1 | ... | ... | 3 | ... | ... | ... | ... |
| November | ... | 5 | ... | 1 | ... | 2 | ... | ... | 20 | ... |
| December | ... | 11 | ... | 3 | 1 | 2 | ... | 1 | 3 | ... |
| Totals 1904... | | 79 | 6 | 18 | 3 | 12 | 3 | 1 | 38 | ... |
| Totals 1903... | | 41 | 4 | 26 | 1 | 17 | 5 | ... | ... | ... |
| Totals 1902... | | 17 | 2 | 16 | 3 | 4 | ... | ... | ... | ... |
| Totals 1901... | | 11 | 2 | 19 | 2 | 8 | 1 | ... | ... | ... |
| Totals 1900... | | 23 | 9 | 18 | ... | 15 | ... | ... | ... | ... |
| Totals 1899... | | 163 | 19 | 22 | 5 | 13 | ... | 1 | ... | ... |
| Totals 1898... | | 65 | 5 | 23 | ... | 14 | ... | 1 | ... | ... |
| Totals 1897... | | 27 | 2 | 37 | ... | 11 | ... | 6 | ... | 1 |

Zymotic
diseases occur-
ing in each
month.

Notifiable Zymotic Diseases occurring in each Ward :

Notifiable
Zymotic
Diseases in
Wards.

| | East Ward | West Ward | South Ward |
|-------------------------|-----------|-----------|------------|
| Smallpox ... | 1 | — | 2 |
| Diphtheria ... | 2 | 2 | 2 |
| Membranous ... Croup | 1 | — | — |
| Erysipelas ... | 4 | 5 | 3 |
| Scarlet fever ... | 13 | 14 | 52 |
| Typhoid fever ... | 9 | 5 | 4 |
| Puerperal fever ... | 1 | — | 2 |
| Chicken Pox ... | 11 | 4 | 23 |
| Totals 1904 ... | 42 | 30 | 88 |
| Totals 1903 ... | 43 | 26 | 25 |
| Totals 1902 ... | 15 | 15 | 12 |
| Totals 1901 ... | 16 | 25 | 2 |
| Totals 1900 ... | 19 | 24 | 22 |
| Totals 1899 ... | 88 | 101 | 34 |
| Totals 1898 ... | 58 | 23 | 27 |
| Totals 1897 ... | 39 | 21 | 24 |

TABLE VII.

Showing deaths from Zymotic Diseases occurring in each month :—

| | Scarlet fever | Diphtheria | Typhoid fever | Typhus fever | Zymotic Enteritis | Puerperal fever | Whooping-cough | Erysipelas | Measles | Monthly Zymotic deaths. |
|----------------|---------------|------------|---------------|--------------|-------------------|-----------------|----------------|------------|---------|-------------------------|
| | | | | | | | | | | |
| January ... | | | | | | | 1 | | | |
| February ... | | | 1 | | | | | | | |
| March ... | | | | | | | | | | |
| April ... | | | | | 1 | 1 | 1 | | | |
| May ... | | | | | | | | | | |
| June ... | | | 1 | | | | | | | |
| July ... | | | 1 | | | | | | | |
| August ... | | | | | 5 | | 1 | | | |
| September ... | | 2 | | | 7 | 1 | | | | |
| October ... | | | | | | | | | | |
| November ... | | | | | | | | | | |
| December ... | | 1 | | | | | | | 1 | |
| Totals 1904... | | 3 | 3 | | 13 | 2 | 3 | | 1 | |
| Totals 1903... | 1 | 1 | 6 | | 4 | | | 2 | | |
| Totals 1902... | | | 2 | | 1 | 2 | 6 | | 13 | |
| Totals 1901... | | | 1 | | 10 | 2 | 3 | 2 | 6 | |
| Totals 1900... | 2 | 1 | | | 10 | 1 | 3 | | | |
| Totals 1899... | 5 | 3 | 4 | | 12 | 2 | 1 | | 6 | |
| Totals 1898... | 3 | | 3 | | 15 | | 4 | 1 | 4 | |
| Totals 1897... | 1 | 1 | 4 | 1 | 6 | | 5 | | | |

TABLE VIII.

Showing deaths from Zymotic diseases occurring in each Ward :—

Deaths from
Zymotic
diseases in
Wards.

| | East Ward | West Ward | South Ward |
|---------------------|-----------|-----------|------------|
| Measles ... | — | 1 | — |
| Whooping-cough | 1 | — | 2 |
| Diphtheria ... | 1 | — | 1 |
| Croup ... | 1 | — | — |
| Typhoid fever ... | 3 | — | — |
| Zymotic Enteritis | 7 | 3 | 3 |
| Puerperal fever ... | — | — | 2 |
| Totals 1904 ... | 13 | 4 | 8 |
| Totals 1903 ... | 11 | — | 3 |
| Totals 1902 ... | 9 | 13 | 2 |
| Totals 1901 ... | 10 | 9 | 5 |
| Totals 1900 ... | 9 | 3 | 5 |
| Totals 1899 ... | 10 | 15 | 8 |
| Totals 1898 ... | 13 | 4 | 13 |
| Totals 1897 ... | 7 | 4 | 7 |

Zymotic death-rate for the last nine years :—

| | | | |
|-------------------------|-----|-----|--------------|
| 1896 | ... | ... | 4.1 per 1000 |
| 1897 | ... | ... | 1.3 „ |
| 1898 | ... | ... | 1.6 „ |
| 1899 | ... | ... | 2.1 „ |
| 1900 | ... | ... | 0.6 „ |
| 1901 | ... | ... | 1.3 „ |
| 1902 | ... | ... | 1.9 „ |
| 1903 | ... | ... | 0.7 „ |
| 1904 | ... | ... | 0.8 „ |
| Average years 1896—1904 | | | 1.6 „ |

Comparative
Zymotic death-
rate corrected
according to
census 1901.

Not including Diarrhoea and Dysentery.

TABLE IX.

Deaths from other than Zymotic Diseases occurring
monthly in each Ward :—

| | East Ward | West Ward | South Ward |
|-----------------|-----------|-----------|------------|
| January ... | 6 | 6 | 6 |
| February ... | 3 | 4 | 4 |
| March ... | 2 | 5 | 6 |
| April ... | 3 | 2 | 8 |
| May ... | 6 | 3 | 4 |
| June ... | 6 | 3 | 3 |
| July ... | 3 | 4 | 5 |
| August ... | 7 | 3 | 3 |
| September... | 3 | 4 | 2 |
| October ... | 6 | 5 | 4 |
| November... | 4 | 3 | 5 |
| December... | 7 | 1 | 1 |
| Totals 1904 ... | 56 | 43 | 51 |
| Totals 1903 ... | 46 | 52 | 42 |
| Totals 1902 ... | 56 | 48 | 48 |
| Totals 1901 ... | 52 | 47 | 43 |
| Totals 1900 ... | 80 | 61 | 32 |
| Totals 1899 ... | 52 | 44 | 37 |
| Totals 1898 ... | 43 | 31 | 36 |
| Totals 1897 ... | 52 | 21 | 38 |

Deaths from
other than
Zymotic
diseases in
Wards.

Detailed causes of Infant Mortality :—

| Detailed causes of Infant Mortality. | | | | | |
|--|-----|-------------|-------------|-------------|---------|
| | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Qtr |
| Premature Birth ... | ... | 2 | 4 | 2 | 3 |
| Debility from Birth ... | ... | 1 | 3 | 5 | 4 |
| Of the above 8 lived from 5 minutes to 15 hours, 5 from 1 to 4 days, 11 from 5 to 15 days. | | | | | |
| Pneumonia ... | ... | 7 | 1 | 4 | 1 |
| Bronchitis ... | ... | 1 | 1 | — | — |
| Marasmus ... | ... | 2 | 3 | 1 | 4 |
| Convulsions... | ... | 5 | 1 | — | 1 |
| Zymotic Enteritis ... | ... | — | 1 | 11 | — |
| Gastritis ... | ... | 1 | 2 | — | 1 |
| Meningitis ... | ... | — | — | — | 1 |
| Heart disease ... | ... | — | 1 | — | — |
| Hydrocephalus ... | ... | 1 | — | — | 1 |
| Otitis Media ... | ... | 1 | — | — | — |
| Rachitis ... | ... | — | 1 | — | — |
| Tabes mesenterica ... | ... | — | 1 | 1 | — |
| Dentition ... | ... | — | — | 1 | 1 |
| Cellulitis ... | ... | — | — | 1 | — |
| Icterus ... | ... | — | — | — | 1 |
| Congenital syphilis ... | ... | — | — | — | 1 |
| Whooping cough ... | ... | 1 | — | — | — |
| | | — | — | — | — |
| Totals ... | ... | 22 | 19 | 26 | 19 |
| | | — | — | — | — |

The figures dealing with infant life, that part of the population under one year of age, are not by any means so satisfactory as we would wish. The latent force in a community, the germ of all that is to be, should be zealously cared for by a wise people.

Infant
mortality.

We discuss religion, high politics, physical degeneration, and man's place in the universe, but the grim tragedy of wasted infant life seldom or never arrests our attention.

f/-

This leakage at the fountain head of our national life is a most serious thing, even viewed locally. A glance at Table II in the appendix will show that out of 3813 children born since we became an Urban Authority (1896) we have buried 640 before completing one year of life.

Of the 521 births registered during the year 1904 86 died before reaching the age of one year, that is for every 1000 babies born in a year 165 died in the same year, or for every 100 births over 16 died before they were a year old.

Infant
death-rate.

Considering now the age at which they died and the cause of death, 24 died from premature birth and debility from birth, eight of which lived from five minutes to 15 hours, five more lived from one to four days. and 11 from five to 15 days.

We thus see that of the 86 deaths almost 28% died before they were a fortnight old. Climatic conditions appear to have but little influence on these early deaths.

The quarterly variation in their number is slight, viz : 1st quarter, three; 2nd quarter, seven; 3rd quarter, seven; 4th quarter, seven. The cause to a large extent is antenatal—weakly, young, and ill-assorted marriages, young girls marrying barely out of their teens with no

Deaths from
Premature
Birth largely
antenatal.

conception of the laws of health, exercise and diet, that should guide the young mother.

Diseases of the respiratory organs—Pneumonia and Bronchitis—account for 15 deaths, against 12 in 1903, ages 1 to 5 years, seven; 6 to 8 years, three; 9 to 12 years, five. Quarterly variation: 1st quarter, eight; 2nd quarter, two; 3rd quarter, four; 4th quarter, one.

In many instances the conditions under which the young of the working classes are nursed in acute diseases are unfavourable to recovery. As a general rule the kitchen is the sick room, for the mother is unable to attend to a sick child upstairs and look after perhaps half-a-dozen others mostly babies downstairs. The kitchen is an exposed room opening directly into the yard or street, often with ill-fitting doors and windows. Further, this little kitchen is the only reception room, where all sorts and conditions of people, from the hawker pushing his wares to the sympathetic inquiring neighbour, are received. Here, too, cooking is done and meals are served, washing scrubbing, fender and grate polishing, the collecting and removal of ashes with its accompanying dust and sulphurous fumes. Small wonder that so many of the poor things die, almost a miracle that so many recover. Most, if not all, the cottages here are provided with nice front parlours but the front door is always barred, and it is seldom one sees a family realizing the benefit to be derived from alternately using the parlour as well as kitchen, by which means they could get full benefit of change of air and surroundings.

The kitchen an unsuitable sick room.

Value of warmth for the young.

In convalescence the thoughtless manner—regulated by habit—in which babies and young children are dressed in short petticoats and short sleeves leaving the most vulnerable part of their bodies exposed at a time when they most require warmth and protection from

chills in our variable climate and in rooms with equally variable temperature accounts for many deaths. So few study the value of warm woollen clothing to protect the extremely sensitive organs of the young infant. Cattle fanciers and breeders appreciate the value of warmth much better than many parents; they realize that no matter what feeding young animals receive if exposed to excessive cold they will never fatten.

Marasmus accounts for 10 deaths. Marasmus is another name for malnutrition. If the young mother often shows lack of knowledge as to her personal hygiene and diet during her period of gestation she is sure to lack the knowledge and training required in rearing an infant. One sees, sometimes, every conceivable form of food crammed into these helpless creatures. I have seen babies one month old fed on potatoes and fat, the diet changed to kidney beans, bread and butter, and pickled onions when six months old. Diarrhœa and wasting is constant, the baby is then said to have "consumption of the bowels" and be beyond recovery.

Unsuitable diet
for young
infants.

Convulsions are given as causes of death in seven cases. Unstable nervous organization and indigestible articles of food in the stomachs of weakly infants are the commonest causes of convulsions.

Zymotic Diarrhœa caused the deaths of 12 infants under one year of age: seven in the East Ward, three in the West Ward, and two in the South Ward; one in the 2nd quarter, and 11 in the 3rd quarter; ages—six one month old, three two to four months old, and three five to nine months old. The South Ward has always enjoyed a degree of immunity from this infant scourge, only 16 infants dying from diarrhœa in nine years. The soil here is much more porous and sandy, and the

Nature of soil
and situation
of villages in
the South
Ward.

situation on a higher level than other parts of the district. The population, although engaged in the same form of industry as those in the East and West Wards, live in separate villages, mostly built on steep hill sides. In other respects, such as improved dwellings, paving and lighting of streets and yards, the re-placing of midden privies and pail closets by water closets, this Ward has not received the same attention as the East and West Wards. Let it be repeated that next to an enlightened supervision of our milk supply, always the staple food of infants, the most important is the paving and asphalting of yards and courts, together with systematic daily flushing of house connections and sewers and copious swilling of yards and pavements with clean water in dry and hot weather. These measures (1) the impervious coverings (2) the flushing and swilling, prevent the germs of summer diarrhœa from mixing with the food and drink of the inmates and so finding access to their bodies. We must not overlook the extreme value, especially in summer and autumn, of carefully storing our milk where there is the least possible chance of contamination and then boiling it in such quantities as are required for immediate use. These measures are equally valuable as preventives against typhoid fever.

The value of
swilling and
flushing courts
and pavements.

It just remains to consider briefly under this head the vital statistics of infant mortality, as far as they affect particular localities or Wards. Of the 521 births registered, 281 were males and 240 females; of these 54 males and 32 females died under one year; so that 162·7 per 1000 male children died compared with 133·3 female children.

Comparative
infant vital
statistics in
Wards.

Again the births in Wards were :—

| | East Ward | West Ward | South Ward |
|-----------|-----------|-----------|------------|
| Births... | 238 | 122 | 161 |
| Deaths... | 39 | 22 | 25 |

We thus see that the Ward death-rate is :—

| | East Ward | West Ward | South Ward |
|----------------|-----------|-----------|------------|
| Death-rate... | 163·8 | 180·3 | 155·2 |
| Birth-rate ... | 39·9 | 30·3 | 42·7 |

This shows that the South Ward has the highest birth-rate and the lowest death-rate, whilst the West Ward is just the reverse.

Small-pox. In the month of February a case was imported from the City of Nottingham by a native of East Kirkby who was employed as a domestic servant there. On taking ill she was sent home by her employer, who had no suspicion what was the matter. Very soon, however, the practitioner in attendance saw it was small-pox. She was forthwith removed to the Small-pox Isolation Hospital. Everything on the premises was disinfected, and a good deal of bedding burned. The inmates, who refused to be re-vaccinated, were kept in quarantine for 15 days. No other person caught the infection, so that this outbreak was happily confined to one case. The prompt recognition and removal of this first case, together with the thorough disinfecting of the premises, bodies, and clothing of the inmates prevented the infection from spreading, and the district remained free from small-pox down to the month of May, when a young workman employed at Newstead Colliery contracted the disease. The nature of the case was very early recognized, and he was removed to the Isolation Hospital. A sister who nursed him also caught the infection. She, too, was early isolated and removed to

Small-pox.

First
outbreak.

Second
small-pox
outbreak.

the Hospital and no other case followed.

Origin of outbreak not traced.

Methods of disinfecting.

The origin of this outbreak was never satisfactorily traced but there is every reason to believe that the disease was contracted in Hucknall Torkard, where several cases existed then, and this young man was known to visit there. Of the three cases notified, one had been vaccinated in infancy and two were unvaccinated. The method of dealing with the infection consisted in—(1) Prompt removal to Small-pox Hospital; (2) vaccination and re-vaccination of the other inmates. The majority, I regret to say, refused to be re-vaccinated and so rendered the following measures more stringent and costly, viz.:—quarantine for 15 days, disinfecting of their persons and the premises, and destroying, by burning, some articles of clothing, bedding, rugs, and carpets.

Measles.

Closing of day and Sunday schools.

Measles not a notifiable disease.

Measles. Down to the month of October the district remained entirely free from measles. But early in this month two families imported the disease from a village in the neighbouring county of Derbyshire. Notwithstanding every effort to prevent its spread by isolation and exclusion from school of children from the same locality the infection gradually spread and developed into an epidemic by the middle of December. The incidence of the attack was confined to the West Ward. Taking advantage of the near approach of the Christmas holidays the elementary schools in this Ward were closed from December 10th to January 8th, 1905. Thanks are specially due to the superintendents of the various Sunday Schools in this Ward for their willing co-operation in closing their schools for the same period. After closing of the schools the epidemic, which was of a mild type, soon subsided. Although many hundreds of young children were attacked only one death is registered up to the end of the year from measles. Measles with us is not

a notifiable disease, and in mild cases no medical attendance is required, so that very often the Medical Officer of Health receives his first notice of such cases from the school registers. To the head teachers of these schools my thanks are due for much valuable information. The methods of isolation practised were — (1) individual isolation in the houses ; (2) exclusion from school of children from infected localities.

Scarlet fever. This infection has been prevalent particularly in the South Ward during the whole year. In all 79 cases were notified, 13 in the East Ward, 14 in the West Ward, and 52 in the South Ward.

Scarlet fever.

As will be seen from Table V, showing Notifiable Zymotic Diseases occurring in each month, the highest number was notified in January, viz., 15, then gradually diminishing to one in June, again gradually increasing to 11 in December.

From the same table it will be seen for the last eight years we were never free from scarlet fever. The lowest total number notified being 11 in 1901, and the highest 163 in 1899. The grand total of scarlet fever for eight years being 426 with 12 deaths, equivalent to a case mortality of 2·8 per 100, a very low percentage, showing that the cases were mild. The method of isolation is as follows :—immediately on receiving a notification the Medical Officer of Health personally visits the house, the patient is isolated, a leaflet containing printed directions is left with those in attendance, together with disinfectants for the use of nurse and patient (see appendix), and children are excluded from day and Sunday school for eight weeks.

Number of cases in eight years.

The chief difficulty in completely stamping out this infection is, first, that people are given so much to moving

Difficulty of stamping out scarlet fever.

from one place to another that fresh cases are often imported ; second, the impossibility of isolating first cases in the homes of the majority of people. Then, again, many people can't be made to understand why the child should be penned up in a room when, as they say, " he is well, the fever has left him, and he takes his food." The indifference, too, with which so many view infection is a hindrance, they are fatalists pure and simple, and don't believe in infection or germs. Elementary schools, too, are foci of infection, so also personal intercourse and visiting amongst neighbours, relatives and friends.

Diphtheria a high death-rate this year.

Diphtheria. Six cases of diphtheria and one of membranous croup were notified. Three in the East Ward, two in the West Ward, and two in the South Ward, with three deaths, nearly 50% case mortality, by far the highest diphtheria death-rate since the use of antitoxin. An investigation of the various causes failed to show that sanitary defects played an important part in their causation. During the seven years ending 1903, 51 cases of diphtheria and croup were notified, with a case mortality of 11·7%, but adding this year's seven notifications, with three deaths, increases the case mortality to 15·5%. The complete success of antitoxin when used early is now admitted on all hands. In not a few places the Sanitary Authority provide antitoxin free of charge for diphtheria cases.

Number notified in eight years.

Free antitoxin for diphtheria.

Enteric or typhoid fever.

Enteric fever. Eighteen cases were notified, nine in the East Ward, five in the West Ward, and four in the South Ward, with three deaths, case mortality of 16·6. One hundred and seventy-nine cases of typhoid fever were notified during the last eight years, with 23 deaths, giving a case mortality of 12·8%. A glance at the following figures will show that notwithstanding a yearly increase of population the total number of typhoids this

Typhoid not increasing—a sign of sanitary improvement.

year is the lowest on record save one year, 1902, when 16 were notified. Typhoid or enteric fever is well known to be spread by insanitary conditions and dirty habits, so that it is very gratifying to find the number so few, for last summer and autumn favoured the spread of this disease.

Number of enteric cases occurring in each Ward since 1897 :—

| | East Ward | West Ward | South Ward | |
|------|-----------|-----------|------------|------------------------------------|
| 1897 | ... 13 | 8 | 16 | |
| 1898 | ... 12 | 7 | 4 | |
| 1899 | ... 5 | 7 | 10 | Number of enteric cases from 1897. |
| 1900 | ... 4 | 9 | 5 | |
| 1901 | ... 2 | 15 | 2 | |
| 1902 | ... 4 | 6 | 6 | |
| 1903 | ... 18 | 5 | 3 | |
| 1904 | ... 9 | 5 | 4 | |

During no summer has there been such systematic and intelligent flushing of sewers as this year. The Council very wisely detailed off a man to see to the sewers being thoroughly flushed twice weekly. Great attention, too, has been paid to clearing out catch pits and midden privies. As will be mentioned further on, valuable improvements have been effected under the Private Street Improvement Act, and asphaltting of back yards in some places. Enteric cases are rigorously isolated, the excreta removed in specially constructed typhoid pails in a closed van direct from the bedroom of the patient to the sewage farm. Here they undergo complete cinderization in a furnace built for the purpose last year. This is a great improvement on the old method of burying the typhoid stools in a corner of the sewage farm.

Systematic flushing of sewers and drains.

7 /

Puerperal fever. Three cases were notified, two in the

Puerperal fever

South Ward and one in the East Ward. The two in the South Ward ended fatally. According to the provisions of the Midwives Act, the cases were duly reported to the County Medical Officer of Health, who personally visited the midwife in attendance.

Chicken-pox.

Chicken-pox. As a measure of precaution against the spread of small-pox this disease was made notifiable from June to December, 1904. Thirty-eight cases were notified, 11 in the East Ward, 4 in the West Ward, and 23 in the South Ward.

Phthisis not on the increase.

Phthisis. Six deaths were registered from this complaint. The following figures will show that as regards phthisis an improvement has set in, doubtless due to the diligence exercised in providing healthier homes; the value of open spaces, and particularly the value of cubic space in reference to the individual unit in the house.

Deaths from phthisis in eight years.

| | | | | |
|------------|------|------|------|------|
| Years ... | 1897 | 1898 | 1899 | 1900 |
| Deaths ... | 7 | 6 | 12 | 12 |
| Years ... | 1901 | 1902 | 1903 | 1904 |
| Deaths ... | 7 | 6 | 8 | 6 |

Let it be noted that the population in 1897 was 8595, and in 1904 13755, an increase of 60%, whilst the increase in phthisical deaths taking the average of these years compared with 1897 is 14·2, but comparing 1897 with 1904 we find a decrease of 14·2.

Consumption caused by living creatures—bacilli.

The disease known as consumption is caused by living creatures, parasites named “tubercle bacilli.” These are so small that no eye can see them; hence they are only seen by the aid of the most powerful microscopes. But so deadly are these microscopic beings that they claim 60,000 victims annually in the United Kingdom. The expectoration or phlegm of consumptives contains millions

of living bacilli. Consumptives, when allowed to deposit their phlegm on the floor or streets, are a great danger to others, for soon the bacilli contaminate the dust, floor, walls, clothing, etc., and thus find an easy access by means of air or food into the human body. Persons suffering from consumption should never spit on anything which cannot be easily burned or disinfected. In like manner vessels used for feeding the consumptives, and their clothing and bedding should be disinfected before being used by others. Consumptives should only spit in spitting cups or pocket spittoons. These now may be had at a very reasonable price in most chemists shops. The contents of the spittoons are best burnt, or mixed with a strong solution of carbolic acid or izal. Where spittoons are not available, papers, bits of clean old rags, or special cheap handkerchiefs should be used and then burnt. Phthisis is not a notifiable disease in this district, but rooms in which phthisical patients die are disinfected free by the Sanitary Authority. This disinfecting is perhaps of as much value as an educator as it is as a germicide. The people begin to realize that consumption is like other fevers "catching," and will be more prone to take precautions.

The phlegm or spit of consumptives very infectious.

Pocket spittoons should be used

Phthisis not notifiable.

Value of disinfectants.

Erysipelas. Twelve cases were notified, four in the East Ward, five in the West Ward, and three in the South Ward, with no deaths.

Erysipelas.

Cancer, malignant disease, said to be now on the increase in many parts of the country. The deaths registered in this district for the last nine years as seen below shows a state of fluctuation, not a distinct increase.

Cancer.

| | | | | | | |
|--------|-----|------|------|------|------|------|
| Years | ... | 1896 | 1897 | 1898 | 1899 | 1900 |
| Deaths | ... | 2 | 4 | 0 | 3 | 4 |
| Years | ... | 1901 | 1902 | 1903 | 1904 | |
| Deaths | ... | 3 | 0 | 5 | 6 | |

Cause still
unknown to
science.

The aetiology of this disease, notwithstanding all the efforts of recent researches, is still an unsolved problem. The value of early operation is again emphasised by the latest reports of experts.

Influenza a
contributory
cause.

Diseases of the respiratory organs—bronchitis, pleurisy, and pneumonia—account for 29 deaths at all ages, 16 in the East Ward, eight in the West Ward, and five in the South Ward, against 30 in 1903, East Ward 14, West Ward 5, and South Ward 11. Naturally the incidence of this disease falls heaviest on the young and aged during the first and last quarter of the year. The “hardy annual” influenza, though not often described as a primary cause of death, nevertheless, carries in its train every year a crop of fatal cases from bronchitis and pneumonia. Then, too, in our inclement and changeable climate we do not pay sufficient attention to the clothing of convalescents—specially infants.

Protest against
unnecessary
exposure of
infants at
excursions,
wakes, &c.

I feel it my duty to record here an emphatic protest against the vicious habit of carrying young infants in arms to public demonstrations, wakes, fairs, and also on workmen’s excursions. Putting aside the risk of infection from such large and mixed crowds collected from every corner of the country side, and sometimes from beyond, I have known babies two or three months old carried in arms on the occasion of excursions to Blackpool and Scarborough, leaving by a crowded train at 3 a.m. one morning and returning by a like crowded train at 3 or 4 a.m. next morning. The mother returns exhausted by travelling and tramping with the baby in arms, and in many cases the baby collapses and dies in 48 hours from pneumonia or diarrhoea.

Heart disease, Seven deaths were registered, 3 in the East Ward, 1 in the West Ward, and 3 in the South

Ward. Heart disease prevalent in a community indicates either the presence of acute rheumatic fever or excessive strain, bodily or mental. Rheumatic fever is by no means common in this district. In looking over the ages of the 73 persons whose deaths are certified as due to heart disease during the last nine years quite a number were over 65 years of age. It is evident that in their case heart disease points to heart failure as part of the general process of senile decay.

Heart
Disease.

Accidents and suicides. Nine deaths are certified as due to accidents and two to suicide. On these 11 inquests were held. Verdicts :—

Accidents &
Suicides.

- Seven accidentally killed.
- One accidentally drowned.
- One accidentally burned.
- One suicide by hanging.
- One suicide by throwing himself under a train.

Having dealt briefly with the causes of death, we give here a summary showing vital statistics of adult mortality in relation to Wards. The number of deaths at all ages was 175, of which 101 were males and 74 females, showing a general death-rate for the whole district of 12·6. Of this number we have already summarised the 86 deaths under one year of age. The remainder in Wards may be classified as follows :—

Vital
Statistics in
relation to
Wards.

| | 1 and under 5 | 5 under 15 | 15 under 25 | 25 under 65 | 65 under 75 | 75 under 85 | Totals |
|---------------|---------------|------------|-------------|-------------|-------------|-------------|--------|
| East Ward ... | 9 | 3 | 1 | 12 | 4 | 1 | 30 |
| West Ward... | 6 | 3 | 1 | 11 | 3 | 1 | 25 |
| South Ward... | 6 | 2 | 3 | 13 | 5 | 5 | 34 |

This shows that excluding infants the East Ward stands lowest with 5.0 per 1000, the West Ward next with 6.4 per 1000, and the South Ward highest with 9.0 per 1000. Though the South Ward shows the highest adult death-rate, yet the average duration of life is greatest in this Ward, judging by the aggregate ages of the five oldest people at death, viz: 395 years; against 368 years in the East Ward; and 357 years in the West Ward.

GENERAL REMARKS.

A subject often referred to in these Reports, street im-
 provements, has now been to a large extent happily
 completed. Under the Private Street Works Act. (1892)
 the following streets have been kerbed, paved, metalled
 and channelled, viz : Alfred street ; Cobden street ; Cross
 street ; Erewash street ; Festus street ; Forest street ;
 Factory road ; Gladstone street ; King street ; Kingsley
 street ; Milton street ; Morley street ; New street ; Pond
 street ; Portland street ; Queen street ; School street ;
 Sherwood street ; Tennyson street ; Unity street ;
 Marlborough road ; Hodgkinson road ; Fisher street ;
 Sherwood street (Annesley Woodhouse) ; Wesley street ;
 Vernon road ; Cookson street ; Harcourt street ; Foster
 street ; Hampden street ; and Park Street.

Improvements
 effected during
 the year-

Streets com-
 pleted.

In the East Ward an excellent system of surface water
 drainage has been completed, whereby roof and surface
 water hitherto passing into the main sewer and unneces-
 sarily overloading our filter beds is now diverted into
 open channels.

Surface water
 drainage for the
 East Ward.

The filter beds at Park Lane Sewage Farm have been
 increased this year by six new secondary beds and two
 large settling tanks. Four primary beds have been
 re-laid, in every respect equal to new. To complete and
 increase their efficiency the primary beds should be
 furnished with automatic distributing arms ; automatic
 arms more than double the working capacity of such beds.

Improvements
 at the Sewage
 Farm.

Automatic
 arms required.

The sewerage from Portland Row is dealt with by
 septic tank and enlarged filter beds. At Todd's Row the
 sewerage is discharged on to a field, after irrigation the
 filterate disappears and is to all appearances received in
 old underground workings. The caretaker at the Park
 Lane outfall deserves much credit for his painstaking
 devotion to the work.

Portland Row
 and Todd's
 Row sewerage.

Improvements
in the sanitary
conveniences of
East Kirkby
and Kirkby
Woodhouse
schools.

Very great improvement has been effected by the County Council in the sanitary conveniences of East Kirkby and Kirkby Woodhouse schools. The old pail closets and midden vaults have been re-placed by excellent water closets automatically flushed. The same improvement is equally called for at the Chapel Street Mixed School and Church Street Infant Schools, Kirkby.

Overcrowding
of schools to a
serious extent.

All the elementary schools in the district are more or less overcrowded, some, as at East Kirkby, to a very serious extent. I understand the matter is actively engaging the attention of the Notts. Education Committee. In this connection I should like to mention that I have often watched the scholars at all the schools during play time romping, running, and sweating, as all healthy young creatures do. Play over, they rush with grimy hands and dust covered faces to the water taps in the cloak room. There are no drinking vessels provided, each in turn puts the tap in his or her mouth. I have counted twenty youths quench their thirst in this fashion in less than five minutes. Equally primitive are their opportunities of ablution, hands and faces washed in cold water without soap. Then, again, only one clean towel is allowed in each week for a school of over 400 adult scholars. It should be mentioned that in some of the schools instead of one large sized towel two small sized towels are placed in the cloak room on Monday morning ; by Wednesday these articles are much dirtier even to look at than the very floor under the children's feet. Is it to be wondered at that schools are notorious centres for the spread of infectious diseases ? A child, say suffering from ringworm will under circumstances like these infect half the school in a very short time. Think of what this means with undetected cases of

No drinking
vessels provid-
ed. Water taps
used in turn by
the scholars.

Soiled towels
the sure cause
of spreading
infection.

diphtheria attending school ; equally so with ophthalmia. The necessity for calling your attention to this serious deficiency in our school hygiene forced itself on me whilst investigating the cause of an outbreak of ophthalmia (muco-purulent) in the Mayfield district of the West Ward last summer. The infection was imported by a family recently come to reside there. The children had sore eyes and went to Kirkby schools, very soon scattered cases of ophthalmia sprung up among children over the whole area embraced by these schools. In Mayfield for several weeks it assumed the form of an epidemic. Active treatment and exclusion from school ultimately stamped out the infection.

Ophthalmia
among the
West Ward
scholars.

We are still without open spaces of recreation and public baths.

Recreation
ground and
public baths.

Under the Private Street Works Act, as already mentioned, much has been done, but the following streets are in statu quo, viz., in the West Ward, Mayfield road, Bentinck Town, Princess street ; East Ward, St. John's Avenue, St. Thomas's Avenue ; in the South Ward, North street, East street, Sherwood rise, Upper Wesley Street, Upper Sherwood street, Sampson street, Fox street, Reform street, and Bentinck street.

Streets in
statu quo.

As seen by reference to the summary of work in the Inspector of Nuisances Department (see appendix) more than usual activity was displayed this year, the credit of which is very largely due to that excellent official. Over 400 houses were reported upon from one cause or another, and an equal number of informal notices served and the nuisances complained of remedied in all but 44 cases. Of these 44, 40 are water closet defects. The gradual adoption of a water carriage system must surely be the aim of every enlightened sanitary authority, but ill-constructed

Slop closets
condemned
and water
closets must
be ventilated
and trapped.

w.c.'s are very doubtful improvements. There are 16 so-called stop closets in the district, they are faulty in principle and detail, so much so that on the matter being reported to the Council they were ordered to be converted into ordinary water closets. It is to be hoped that this alteration will be completed without delay and that this class of closet in the future will not be allowed. The remaining 24, in Milton street and Gladstone street, require for their efficient and safe use a disconnecting and inspection chamber between the main sewer and the closet and again a suitable ventilator between this chamber and the closet. Now that w.c.'s are coming into use more sewer ventilators are required, especially in the East Ward, at such places as the junctions of Milton street and Marlborough road, Gladstone street and Marlborough road, junctions of Sherwood street, Unity street, Prospect street, and Byron street with School street; the dead end of Hodgkinson road, and junction of Forest street and St. John's avenue with Crocus Street. The ventilator at the junction of Station street and Low Moor road (four lane ends) should be re-placed by a new one.

W.C.'s should be ventilated, with disconnecting and inspection chambers.

Sewer ventilators required.

New furnaces built for infectious excreta.

Two specially constructed furnaces for the cinderization of infectious excreta have been erected, one at the disused sewage farm in Lindley's Lane, the other at Park Lane outfall.

Milk supply a source of danger.

On page 18, Report 1899, reference is made at length to the Dairy, Cowsheds, and Milk Shops amending orders. The effect, as pointed out, of these orders is to throw upon every sanitary authority the duty of supervising the milk supply of their district. Annual Report, 1901, p.p. 19—20, and again Report, 1903, p. 31, attention is drawn to the fact that nothing has been done, and that the lack of supervision of our milk supply remains

our chief unremedied sanitary defect.

We greatly need a steam disinfecter, especially in connection with small-pox outbreaks. In these outbreaks much bedding and clothing has to be burnt and compensation paid for the same. A steam disinfecter would save this. Steam disinfecter required.

As mentioned on p. 30 last year's Report, towards the end of the year (1903) 89 houses were reported as unfit for human habitation, chiefly from lack of suitable sanitary conveniences. By the close of the year 67 had the necessary improvements effected, leaving 22 in statu quo. In the case of 17 legal proceedings had to be taken against the owners (Green for 16 houses and Davison for one). The magistrates ordered the specified improvements to be carried out within six weeks, otherwise a closing order would be issued. The required improvements were effected within the expiration of the time stated. The remaining five, in Bradley's yard, Kirkby, were pulled down this summer and practically built into new houses. Houses unfit for human habitation (1903) Proceedings taken.

This year 17 houses were reported as unfit for human habitation, and eight from overcrowding. At the time of writing the specified improvements are being effected in the houses condemned as unfit for habitation. In the case of the overcrowded houses the nuisance was abated in three of them immediately on notice being served. In one proceedings had to be taken; the magistrates ordered the house to be closed within one month. This same house has since been pulled down and rebuilt. The remaining four, at Portland Row, remain in statu quo. All the houses in this row are lacking in bedroom and scullery accommodation. See special report presented to the Council 29th Nov., 1904. Houses unfit for human habitation (1904) Overcrowding.

We still continue to build new houses without testing their drains or issuing a certificate that they are fit for occupation. This is a serious fault, for no part of a building requires more careful supervision than its connections and drains. Let these be faulty in their construction, the evil is concealed and will often work mischief for years before being detected.

New houses,
their drains not
tested.

The scavenging of the district is now entirely done by the Council. This is a great improvement on the contractors' system, for these men invariably neglected the scavenging when they were otherwise busy.

Scavenging
done now by the
Council.

Under Section 32 of the Factory and Workshops Act, 1901, I am required to report specially to you on the administration of the Act in workshops and workplaces, so far as matters under the Council are concerned. A list of factories, workshops, and workplaces is submitted (see appendix). From this it will be seen that there are within your district three factories, six workshops (bake-houses), and six workplaces (tailoring and dressmaking). The administration of the Factory and Workshops Act, 1901. During the year 37 visits were paid to these places by your Sanitary Inspector and myself. It will be further observed from the summary of reports that at one factory early in the year improvements in sanitary conveniences were effected. At another manure heaped too near the premises was removed; whilst at a third—a workshop—manure heap and pig styes too near the premises were removed, not to be re-placed. In a fourth place notice to limewash was given and carried out. In all, sanitary conveniences, sufficient means of escape from fire, cleanliness, air space, ventilation, and drainage of floor were found to be satisfactory. In several instances in domestic workshops in which the work is done at irregular intervals and does not furnish the principal means of living to the family, as specified by Home Work Orders of 11th December, 1901, and 14th July, 1902, when inmates were suffering from infectious disease notifiable in the district, work was prohibited according to a specified time.

May I thank you, gentlemen, on behalf of the Sanitary Officials for the unvaried courtesy and consideration you have at all times shown us.

I beg to remain,

Your obedient servant,

JOHN MACKENZIE.

APPENDIX.

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Summary of Sanitary Work done in the Inspector of Nuisances Department during the year 1904 :—

| | | Inspections made | Informal notices served by Inspector | Legal Notices by authority of the Council | Nuisances abated after Notice | In statu quo |
|------------------------------------|-----|------------------|--------------------------------------|---|-------------------------------|--------------|
| Dwellinghouses :— | | | | | | |
| Insanitary | ... | 35 | 35 | 16 | 16 | — |
| Overcrowding | ... | 8 | 8 | 1 | 1 | 4 |
| Ashpits and Privies | ... | 163 | 163 | — | — | — |
| Defective pail closets | ... | 70 | 70 | — | — | 40 |
| Defective W.C.'s | | 40 | 40 | — | — | — |
| House Drainage :— | | | | | | |
| Defective Traps and no connections | | 93 | 93 | — | — | — |
| Water supply | ... | — | — | — | — | — |
| Offensive Trade | ... | 1 | 1 | — | — | — |
| Other nuisances | ... | 4 | 4 | — | — | — |

The foregoing cases were submitted to the Council monthly as follows :—

| | | | | | |
|------|------|------|-------|------|------|
| Jan. | Feb. | Mar. | April | May | June |
| 22 | 21 | 26 | 25 | 50 | 14 |
| July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 30 | 66 | 37 | 60 | 43 | 20 |

Houses disinfected after infectious disease ... 117

Schools disinfected after re-opening ... Nil.

Summary of Visits to and Reports of Workshops and Factories during 1904.

| NAME AND SITUATION | NAME AND ADDRESS OF OWNER | WORK CARRIED ON | NUMBER OF WORKERS | NUMBER OF ROOMS | CUBIC SPACE | W.C.'s | | DATE OF INSPECTIONS | SUMMARY OF REPORTS |
|--|--|-----------------------|-------------------------|-----------------------|---------------------|--------|-------|------------------------------|---|
| | | | | | | M | F | | |
| FACTORIES— | | | | | | | | | |
| Hosiery Factory, Nuncargate | Geo. Cook, Esq., Nuncargate, Kirkby, Notts. | Hosiery | 19 | 2 | 11035 cubic feet | 1 | — | Jun. 2, Sep. 21 | Space and ventilation satisfactory |
| Hosiery Factory, Station Street, East Kirkby | Walker and Sons, Station Street, East Kirkby, Notts. | „ | 71 | 2 | 63000 | 3 | 3 | Mar. 25, Jun 28 Sep. 3 | Space and ventilation sufficient |
| Kirkby Manufacturing Co., Prospect Street, East Kirkby | Kirkby Manufacturing Co., Prospect Street, East Kirkby | „ | 20 | 4 | 31360 | 1 | 1 | Jun 15, Sep 10 Dec 30 | Improvement in sanitary conveniences effected |
| Ærated Water Works, The Park, Kirkby | Hardy and Martin, The Park, Kirkby | Ærated waters | 3 | 2 | 16800 | 1 | 1 | Jun. 10 Sep. 12 | Ventilation and condition of workshop satisfactory |
| WORKSHOPS— | | | | | | | | | |
| Bakehouse, Low Moor Road, East Kirkby | E. T. Beaumont, Esq., East Kirkby, Notts. | Baking | 3 | 2 | 1232 | 1 | — | Jan 8, Mar 28 Sep 14 | Ventilation and condition of workshop satisfactory |
| Bakehouse, Diamond Avenue, East Kirkby | W. B. Gore, Diamond Avenue, East Kirkby | „ | 2 | 1 | 1032 | 1 | privy | Jan. 21 June 28 | „ „ |
| Bakehouse, Prospect Street, East Kirkby | R. Bains, Prospect Street, East Kirkby, Notts. | „ | 1 | 1 | 1040 | 1 | pail | Apr 22, Sep 14 Dec. 21 | Notice to remove manure heap and pig sty as too near. Done. |
| Bakehouse, Low Moor Road, East Kirkby | J. Burton and Sons, Low Moor Road, East Kirkby | „ | 1 | 1 | 1233 | 1 | „ | Feb. 12 Nov. 14 | Ventilation and space satisfactory. |
| Bakehouse, The Hill, Kirkby | J. Bond, The Hill, Kirkby | „ | 2 | 1 | 1452 | 1 | „ | Feb. 4 Sep. 21 Jan. 19 | Notice to lime wash. Done. |
| Bakehouse, Reform Street, Annesley Woodhouse | Geo. Fisher, Reform Street Annesley Woodhouse | „ | 1 | 1 | 1040 | 1 | „ | May 20 | Ventilation and premises in good condition. |
| WORKPLACES— | | | | | | | | | |
| Tailoring, Station Street, East Kirkby | Fred King, Station Street, East Kirkby | Tailoring | 2 | 1 | 1680 | 1 | „ | Mar. 3 Dec. 10 | (now discontinued as a workshop) |
| Dressmaking, Gladstone Street, East Kirkby | Mrs. Scothern, Gladstone Street, East Kirkby | Dress-making | 3 girls | 1 | 1328 | 1 | privy | Jun. 10 Sept. 20 | Ventilation and premises in good condition |
| Dressmaking, Diamond Avenue, East Kirkby | Miss Chadburn, Diamond Avenue, East Kirkby | „ | 5 girls | 1 | 1328 | 1 | „ | Jun. 10 Sep. 20 | „ „ |
| Dressmaking, 36 Victoria Road, Kirkby | Miss Sharley, 36 Victoria Road, Kirkby | „ | 3 girls | 1 | 1496 | 1 | „ | Jun. 10 Sep. 20 | „ „ |
| Dressmaking, The Hill, Kirkby | Miss Hewis, The Hill, Kirkby | „ | 3 girls | 1 | 1440 | 1 | „ | Jun 10 Sep. 20 | (now discontinued as a workshop) |
| Dressmaking, Fisher Street, Nuncargate | J. Beet, Fisher Street, Nuncargate, Notts. | „ | 3 women | 1 | 768 | 1 | „ | Jun 23 Sep 10 Dec. 14 | Minimum cubic space only |

TABLE I.

For whole District. Corrected according to Census 1901.

| Year | Population estimated to middle of each year | Births | | Deaths under 1 year of age | | | Deaths at all ages | | Deaths at all ages. Nett | | |
|------------------------------|---|--------|------|----------------------------|-------------------------------|--------|--------------------|------|--------------------------|------|--|
| | | Number | Rate | Number | Rate per 1000 bths registered | Number | Number | Rate | Number | Rate | |
| 1896 | 8520 | 337 | 39.5 | 96 | 284.8 | 158 | 158 | 18.5 | 159 | 18.5 | |
| 1897 | 8898 | 398 | 44.7 | 56 | 140.7 | 129 | 129 | 14.4 | 129 | 14.4 | |
| 1898 | 9277 | 354 | 38.1 | 54 | 152.5 | 140 | 140 | 15.0 | 139 | 15.8 | |
| 1899 | 9655 | 412 | 42.6 | 58 | 140.7 | 159 | 159 | 16.4 | 158 | 16.7 | |
| 1900 | 10034 | 401 | 39.9 | 82 | 204.4 | 190 | 190 | 18.9 | 190 | 18.9 | |
| 1901 | 10412 | 429 | 41.2 | 72 | 167.8 | 166 | 166 | 15.9 | 166 | 15.9 | |
| 1902 | 11495 | 466 | 40.5 | 81 | 173.8 | 176 | 176 | 15.3 | 180 | 15.6 | |
| 1903 | 12660 | 495 | 39.0 | 55 | 111.1 | 154 | 154 | 12.1 | 155 | 12.1 | |
| Averages for years 1896-1903 | 10118.8 | 411.5 | 40.7 | 69.2 | 171.9 | 159.0 | 159.0 | 15.8 | 159.5 | 15.9 | |
| 1904 | 13755 | 521 | 165 | 86 | 165 | 175 | 175 | 12.6 | 177 | 12.8 | |

TABLE II.

Corrected according to Census 1901.

| Year | Kirkby-in-Ashfield Urban District | | | | East Ward | | | | West Ward | | | | South Ward | | | |
|------------------------------------|---|-------------------|--------------------|---------------------|------------------------------|-------------------|--------------------|---------------------|------------------------------|-------------------|--------------------|---------------------|------------------------------|-------------------|--------------------|---------------------|
| | Population estimated to middle of each year | Births registered | Deaths at all ages | Deaths under 1 year | Population to middle of year | Births registered | Deaths at all ages | Deaths under 1 year | Population to middle of year | Births registered | Deaths at all ages | Deaths under 1 year | Population to middle of year | Births registered | Deaths at all ages | Deaths under 1 year |
| 1896 | 8520 | 337 | 158 | 96 | | 120 | 41 | 35 | | 60 | 26 | 12 | | 61 | 26 | 16 |
| 1897 | 8898 | 398 | 129 | 56 | | 178 | 58 | 21 | | 79 | 24 | 7 | | 141 | 47 | 28 |
| 1898 | 9277 | 354 | 140 | 54 | | 157 | 56 | 29 | | 91 | 35 | 8 | | 106 | 49 | 17 |
| 1899 | 9655 | 412 | 159 | 58 | | 180 | 58 | 23 | | 108 | 56 | 21 | | 124 | 45 | 14 |
| 1900 | 10034 | 401 | 190 | 82 | | 181 | 88 | 44 | | 107 | 66 | 23 | | 113 | 36 | 15 |
| 1901 | 10412 | 429 | 166 | 72 | 3912 | 169 | 61 | 25 | 3193 | 125 | 55 | 25 | 3307 | 135 | 50 | 22 |
| 1902 | 11495 | 466 | 176 | 81 | 4530 | 204 | 65 | 28 | 3430 | 129 | 61 | 28 | 3535 | 133 | 50 | 25 |
| 1903 | 12660 | 495 | 154 | 55 | 5325 | 212 | 57 | 24 | 3705 | 146 | 52 | 12 | 3630 | 137 | 45 | 79 |
| Averages of years 1896 to 1903 ... | 10118.8 | 411.5 | 159 | 69.2 | 1720.8 | 175.1 | 60.5 | 28.6 | 1291 | 105.6 | 46.8 | 17 | 1309 | 118.7 | 43.5 | 19.5 |
| 1904 | 13755 | 521 | 177 | 86 | 5965 | 238 | 70 | 39 | 4020 | 122 | 47 | 22 | 3770 | 161 | 60 | 25 |

TABLE III.

Cases of Infectious Disease notified during the year 1904.

| Notifiable Diseases | Cases notified in whole District. | | | | | | | Total cases notified in each locality | | | Hospital Cases from each locality. | | |
|---------------------|-----------------------------------|---------|--------|---------|----------|----------|----------------|---------------------------------------|-----------|------------|------------------------------------|-----------|------------|
| | At all ages. | Under 1 | 1 to 5 | 5 to 15 | 15 to 25 | 26 to 65 | 65 and upwards | East Ward | West Ward | South Ward | East Ward | West Ward | South Ward |
| | | | | | | | | | | | | | |
| Small-pox ... | 3 | | ... | ... | 3 | ... | | 1 | ... | 2 | 1 | | 2 |
| Diphtheria ... | 6 | | 4 | 2 | ... | ... | | 2 | 2 | 2 | | | |
| Membranous croup | 1 | | ... | 1 | ... | ... | | 1 | ... | ... | | | |
| Erysipelas ... | 12 | | 3 | 3 | 1 | 5 | | 4 | 5 | 3 | | | |
| Scarlet fever ... | 79 | | 36 | 32 | 9 | 2 | | 13 | 14 | 52 | | | |
| Enteric fever ... | 18 | | 3 | 8 | 1 | 6 | | 9 | 5 | 4 | | | |
| puerperal fever ... | 3 | | ... | ... | 2 | 1 | | 1 | ... | 2 | | | |
| Varicella ... | 38 | | 27 | 11 | ... | ... | | 11 | 4 | 23 | | | |
| Totals ... | 160 | | 73 | 57 | 16 | 14 | | 42 | 30 | 88 | 1 | | 2 |

TABLE IV.

Causes of, and ages at death during year 1904.

| Causes of Death | Deaths in or belonging to whole District at subjoined ages | | | | | | Deaths in or belonging to localities at all ages. | | |
|---------------------------------------|--|-------------|--------------|---------------|---------------|--------------|---|-----------|------------|
| | All ages | | | | | | East Ward | West Ward | South Ward |
| | Under 1 | 1 & under 5 | 5 & under 15 | 15 & under 25 | 25 & under 65 | 65 & upwards | | | |
| Measles ... | 1 | | | | | | 1 | | 2 |
| Whooping-cough ... | 3 | 1 | 1 | | | | 1 | 1 | 1 |
| Diphtheria and membranous croup | 2 | 2 | | | | | | | |
| Croup ... | 1 | | | | | | 1 | | |
| Enteric Fever... | 3 | | 1 | | | | 3 | | |
| Epidemic influenza | 1 | | | | | | | | |
| Diarrhoea ... | 13 | 1 | | | | | 7 | 1 | 3 |
| Enteritis ... | 4 | | | | | | | 3 | 3 |
| Puerperal Fever | 2 | 4 | | | | | | 1 | 2 |
| Phthisis ... | 6 | | | 2 | | | | 3 | 2 |
| Other tubercular diseases | 7 | | 1 | 1 | | | 1 | 2 | 1 |
| Cancer ... | 6 | 2 | | | | | | 1 | 3 |
| Bronchitis ... | 9 | 5 | 1 | 1 | | | 4 | 2 | 2 |
| Pneumonia ... | 20 | 11 | 2 | | | | 7 | 1 | 3 |
| Alcoholism | 1 | 4 | 1 | | | | 9 | 8 | 3 |
| Cirrhosis of Liver | 1 | | | | | | 1 | | |
| Premature Birth | 11 | 11 | | | | | 5 | 1 | 5 |
| Diseases and Accidents of Parturition | 1 | | | | | | | | 1 |
| Heart Disease | 7 | 1 | | | | | 3 | 1 | 3 |
| Accidents ... | 9 | | 2 | | | | | 6 | 3 |
| Suicides ... | 2 | | 1 | | | | 1 | 4 | |
| Debility from Birth | 13 | 13 | | | | | 2 | 4 | 5 |
| Meningitis ... | 3 | 1 | 2 | | | | 1 | 1 | 1 |
| Nephritis ... | 3 | | 1 | 1 | | | 2 | 1 | 1 |
| Marasmus ... | 8 | | | | | | | 2 | 3 |
| All other causes | 41 | 17 | 3 | 4 | 2 | 3 | 12 | 11 | 15 |
| All causes | 177 | 86 | 21 | 9 | 10 | 32 | 71 | 47 | 59 |